



寛数学り 5 控制系 Факультет вычислительной математики бернетики Faculty of Computational Mathematics and Cybernetics

应用数学讲座

Научный Семинар по Прикладной Математике **Research Seminar on Applied Mathematics**

应用数学报告(96)

报告人 / Докладчик / Speaker: Irina V. Mursenkova

研究中心

题目 / Название / Title: Pulsed discharges in gas flows: a review of modern research

时间 / Время / Time: 2024.1.16, 15:00-16:00

地点 / Mecto / Venue: 主楼336

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прикладной математики ППИ – МГУ-ППИ ВІТ–SMP

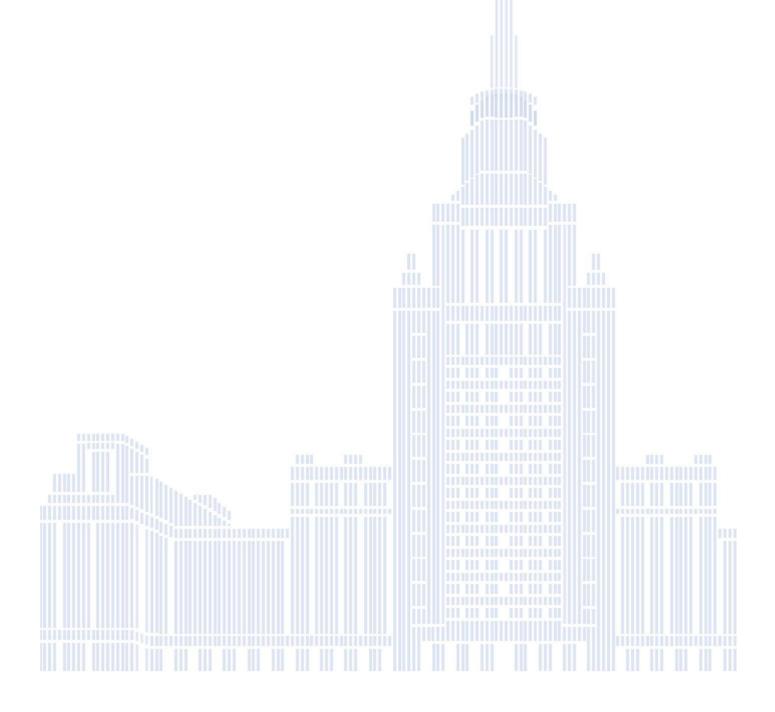
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摘要 / Аннотация / Abstract:

The lecture discusses gas discharges of various types, which are used for plasma control of gas flows in plasma aerodynamics. A review modern study of discharges in gas flows shows the importance of describing the fundamental features of discharge development and the properties of gas-discharge low-temperature plasma. Experimental and theoretical study of electrical discharges in gas flows are mainly related to the study of the mutual influence of the electrical characteristics of the discharge and the gas-dynamic parameters of the flows, including supersonic flows. The modes of realization of discharges of various types in gas flows and their influence on gas-dynamic flows are considered. The lecture includes information about numerical methods for calculating gas flows with pulsed energy input. The prospects for the use of pulsed discharges in gas flows are analyzed.

个人简介:

Irina V. Mursenkova, an Associate Professor in the Faculty of Physics at Lomonosov Moscow State University (MSU) and at the National Research University 'Moscow Power Engineering Institute' (MPEI), focuses on several key research areas. These include the interaction of pulsed discharges with supersonic flows and shock waves, as well as the development of diagnostic methods for fast processes in gas and plasma. Her current research is concentrated on studying surface sliding discharges to control shockwaves and boundary layers. In her relevant field of study, she has published over 100 academic papers and authored 11 textbooks. She has also hosted and participated in several projects under the Russian Science Foundation (RSF) and the Russian Foundation for Basic Research (RFBR).



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